

WHAT IS CLAIMED IS:

1 1. A system for providing accurate data storage emulation in a computer system,
2 the system comprising:

3 a host computer system having at least one storage system;
4 an emulating computer in communication with said host computer system; and
5 an emulating storage system in communication with said emulating computer
6 dedicated to emulation of an operation of at least one of said at least one storage systems.

1 2. The system of claim 1 wherein said emulating storage system is disposed
2 within an enclosure housing said emulating computer.

1 3. The system of claim 1 wherein said emulating storage system is located
2 externally to an enclosure housing said emulating computer.

1 4. The system of claim 1 further comprising:
2 at least one additional emulating storage system.

1 5. The system of claim 1 wherein said emulating storage system includes
2 operating characteristics substantially approximating operating characteristics of said at least
3 one storage system of said host computer.

1 6. The system of claim 1 further comprising:
2 means for preserving data stored in said emulating storage system during emulated
3 power cycling of said emulating storage system.

1 7. The system of claim 1 wherein said at least one storage system comprises:
2 a hard disk drive having a storage capacity; and
3 said emulating storage system comprises:
4 a hard disk drive having a storage capacity substantially equal to said storage
5 capacity of said hard disk drive.

1 8. The system of claim 1 wherein said emulated storage system substantially
2 excludes data pertaining to internal operation of said emulating computer.

3 9. A method for accurately emulating host computer data storage, the method
4 comprising the steps of:
5 providing a host computer system capable of interacting with at least one storage
6 system native to said host computer system;
7 disposing an emulating computer in communication with said provided host computer
8 system;
9 coupling an emulating storage system to said disposed emulating computer; and
10 dedicating said coupled emulating storage system to emulation of said at least one
11 storage system native to said host computer system.

1 10. The method of claim 9 further comprising the step of:
2 excluding data associated with an internal operation of said emulating computer from
3 said dedicated coupled emulating storage system.

1 11. The method of claim 9 further comprising the step of:
2 disposing said coupled emulating storage system within an enclosure housing said
3 emulating computer.

1 12. The method of claim 9 further comprising the step of:
2 disposing said coupled emulating storage system outside an enclosure housing said
3 emulating computer.

1 13. The method of claim 9 further comprising the step of:
2 dedicating each of a plurality of emulating storage devices to a separate one of said at
3 least one storage devices native to said host computer system.

1 14. The method of claim 13 further comprising the step of:
2 emulating a succession of said at least one storage device native to said host computer
3 system employing a succession of said plurality of dedicated emulating storage devices.

1 15. The method of claim 14 further comprising the step of:
2 preserving data stored in said plurality of dedicated emulating storage devices while
3 said succession of said at least one storage devices native to said host computer system is
4 emulated.

1 16. A system for emulating an operation of at least one storage device adapted for
2 operation with a host computer system, the system comprising:

3 means for dedicating an emulating storage device to each of said at least one storage
4 devices adapted for operation with said host computer system, thereby establishing at least
5 one dedicated emulating storage device;

6 means for coupling said at least one dedicated emulating storage device to said host
7 computer via an intelligent interface; and

8 means for monitoring an operation of said at least one dedicated emulating storage
9 device.

0301 17. The system of claim 16 wherein said monitoring means comprises:

0302 means for diagnosing a fault condition among said at least one dedicated emulating
0303 storage devices.

0301 18. The system of claim 17 wherein said monitoring means further comprises:

0302 means for performing diagnostic operations in response to said diagnosed fault
0303 condition.

1 19. The system of claim 16 wherein said means for dedicating comprises:

2 selecting said at least one dedicated emulating storage device having operating
3 characteristics substantially approximating operating characteristics of said at least one
4 storage device adapted for operation with said host computer system.

1 20. The system of claim 16 wherein said intelligent interface is a computer.